Remarks

The Applicants have amended Claims 1, 2 , 3 and 8 to recite that the film has a cushion factor of about 16 to about 30%. Support may be found in Claims 15, 34, 35 and 36, all of which have now been cancelled. Entry into the official file is respectfully requested.

The Applicants note with appreciation the Examiner's helpful comments with respect to the drawings. The Applicants enclose new Figs. 1, 2 and 5 wherein the arrows have been removed. Withdrawal of the objection to the drawings is respectfully requested.

Claims 1-39 stand rejected under 35 USC §112 as being indefinite. The Applicants again note with appreciation the Examiner's helpful comments with respect to Claims 1, 2, 3, 8 and 15-34.

With respect to Claims 15 and 34 and the term "cushion factor," the Applicants respectfully submit that this term is actually quite definite and an actual definition is provided in the Applicants' Specification. The Applicants invite the Examiner's attention to paragraph [0235] in the Applicants' Specification on page 79, wherein "cushion factor" is specifically defined. Given that claims are interpreted based on their description in the Specification, it can readily be seen that one skilled in the art can consult the Applicants' Specification for the definition of cushion factor and how such cushion factors are actually measured. Thus, the Applicants respectfully submit that the term "cushion factor" is quite definite and in compliance with §112. Withdrawal of that portion of the rejection is respectfully requested in view of the cancellation of both claims.

With respect to Claims 1, 2, 3 and 8, the Applicants respectfully submit that there are indeed structural features present in all four of those claims. For example, Claim 1 recites a biaxially oriented white polypropylene film. This specific language recites structure in the form of a film and the chemical composition of that film. Also, that claim contains other structural elements such as substantially non-nucleus voids and also provides physical characteristics. Thus, the claim recites not only physical properties, but also chemical and structural features.

Claim 2 recites even further structural features wherein it recites a biaxially oriented white polypropylene film that comprises a skin layer and a core layer copolymerized with a polypropylene resin. That core layer also recites substantially non-nucleus voids. These are all chemical and structural features on top of the additional physical characteristics that are recited.

Claim 3 recites a biaxially oriented white polypropylene film. The film comprises a skin layer laminated to at least one side of the core layer. This is all structure. Claim 3 also includes physical properties on top of those structural features.

Finally, Claim 8 again recites a biaxially oriented white polypropylene film. The film includes a skin layer laminated to at least one side of the core layer copolymerized with a polypropylene resin having a substantially non-nucleus void. These are once again all chemical and structural features that accompany other physical properties.

The Applicants therefore respectfully submit that all of Claims 1, 2, 3 and 8 recite minimum structural features and chemical features on top of physical characteristics. Thus, the Applicants respectfully submit that those claims are all in compliance with §112. Withdrawal of the rejection is respectfully requested.

Claims 1-39 stand rejected under 35 USC §103 over the hypothetical combination of Sadamitsu with Asakura. The Applicants note with appreciation the Examiner's detailed comments hypothetically applying the combination against those claims. The Applicants nonetheless respectfully submit that one skilled in the art would not make the combination, but in any event, such a combination would result in films having a different structure and/or different physical characteristics from those specifically claimed. Reasons are set forth below.

The rejection states that Asakura discloses a biaxially oriented thermal transfer recording film that includes a polypropylene containing core layer sandwiched by skin layers. The product is said to have high glossiness and it is speculated that it would exhibit the Applicants' claimed half crystallization time and densities. However, the rejection admits that Asakura does not disclose the core layer as recited in selected ones of the claims and turns to Sadamitsu to cure that deficiency because Sadamitsu is said to disclose a polypropylene base including ß-crystallization nucleators which impart ß-crystal activity. Sadamitsu is also said to include voids which are non-nucleus voids since there are no nucleating particles left in the voids after it is stretched. Thus, the rejection concludes by stating that it would have been obvious to modify the core layer of Asakura by using the porous layer of Sadamitsu for the purpose of imparting increased breakage resistance and thickness uniformity.

The Applicants respectfully submit that one skilled in the art would not make the hypothetical substitution. The reason includes the fact that it is fundamental to the essence of Asakura that the layer consists of 10-40 wt% of PMP (poly-4-methylpentene-1) with crystalline

polypropylene (PP) containing a beta crystallization nucleating agent. Asakura teaches that if the proportion of the PMP is less than the stated range, the cushion being properties of the resulting film will be insufficient, and if the proportion is outside of the stated range, the variation of dispersion PMP may result in breakage of the film during stretching. Thus, Asakura teaches that if the proportion of PMP is either less than or more than the specified range, delamination at the interface between layers will readily occur and that breakage can be a problem. Again, this is the fundamental essence of Asakura.

With that in mind, one skilled in the art would not substitute the Sadamitsu porous layer for the Asaura core layer since the Asakura core layer is the essence of the Asakura disclosure. Substituting the Sadamitsu porous layer in place of the Asakura core layer would essentially destroy the basic and fundamental point of the discovery of Asakura that having the prescribed quantity of PMP in conjunction with PP and the nucleating agent avoids the problematic delamination previously encountered. One skilled in the art would not substitute the Sadamitsu porous layer for the Asakura core layer when such a substitution would destroy the fundamental discovery of Asakura which provides the benefit accorded by Asakura. In that regard, it must be remembered that there must not only be motivation to make modifications to a primary reference, but a reasonable expectation that such a modification would result in success. The Applicants respectfully submit that there would be no expectation of success in this instance since the essence of Asakura is the inclusion of PMP with PP and the nucleating agent to reduce delamination. One skilled in the art would not have a reasonable expectation that substituting the porous Sadamitsu core layer for that of the Asakura core layer would bring about that beneficial result. Thus, the Applicants respectfully submit that those skilled in the art would not make such a combination.

In any event, the Applicants respectfully submit that the combination would result in a structure that is different from what the Applicants claim. In a comparison between the rejected claims and Asakura, a film of Asakura comprises ß crystallization nucleating agent and poly-4-methyl pentene-1 in the core layer (A layer). On the other hand, the Applicants' film has voids with no nucleating agent.

Similarly, in a comparison between the rejected claims and Sadamitsu, Sadamitsu does not disclose making uniform and fine voids, nor to obtain a high cushion factor.

Advantages of the Applicants' claimed subject matter are seen from paragraphs [0057] to [0062] in the Specification, and a very uniform and fine void is shown in Figure 2, with a diameter of less than 0.1 μm in the film thickness direction (from top to bottom direction). The uniform and fine voids make a film possible to have a high cushion factor.

Sadamitsu discloses "a maximum pore size of 0.1 to 5 μm in the film thickness direction" in Claim 5, and the film of Sadamitsu is not uniform and has no fine voids, but instead has coarse voids which cannot obtain a high cushion factor. The cushion factor of Sadamitsu must be out of the Applicants' range. Thus, it is not possible to achieve the Applicants' cushion factor from Asakura or Sadamitsu, whether taken individually or collectively.

To make uniform and fine voids, the Applicants invite the Examiner's attention to Example 2 as follows:

> An H-PP (WF836DG3, produced by Sumitomo Chemicals, Co., Ltd., MFR: 7g/10 min, II: 96 %), 94.8 % by weight, linear low density polyethylene obtained by a metallocene catalyst ("Kernel" KS560 produced by Mitsubishi Chemical Corp., MFR: 17g/10 min (190°C); hereafter abbreviated as m-LLDPE), 5 % by weight and NU-100, 0.2 % by weight as β-crystal nucleating agent were mixed and supplied to a twin screw extruder to thereby be melted and mixed at 280°C. After that, ...

Furthermore, Sadamitsu discloses that the maximum pore size (SEM, thickness direction) of the Comparative Examples is smaller than the maximum pore size of the Examples. Thus, Sadamitsu seeks a larger pore size. Withdrawal of the rejection is respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,

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